

10/565573

1AP20 Rec'd PCT/PTO 23 JAN 2006

**IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE – PCT BRANCH**

In the application of:

Daniel J. Smith

Application No: PCT/US04/23867

Filed: 26 July 2004

For: STABILIZATION AND IONIC  
TRIGGERING OF NITRIC OXIDE  
RELEASE

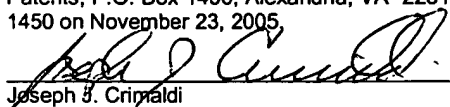
EU 703640996 US

Examiner:

David Vanik

**CERTIFICATE OF MAILING (37 CFR § 1.10)**

I hereby certify that the following correspondence was deposited with the United States Postal Service as Express Mail, Express Mail No. EU 703640996 US, in an envelope addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 23, 2005.

  
Joseph J. Crimaldi

**ARTICLE 19 AMENDMENTS, REPLACEMENT PAGES AND REMARKS TO THE  
INTERNATIONAL SEARCH REPORT DATED 29 SEPTEMBER 2005**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The paper is in response to the International Search Report that issued on 29 September 2005, for which a two (2) month period of response was given. Enclosed herewith are replacement pages in light of the Article 19 claim amendments made to International Application No. PCT/US04/23867.

The necessary replacement pages are attached hereto. The Remarks start on page 2 of this response.

Application Number:  
Response Dated:  
Search Report Dated:

PCT/US04/23867  
November 23, 2005  
29 September 2005

The claims have been amended under Article 19. Specifically, the subject matter of original claims 1 and 2 have been combined, and this subject matter is now contained in claim 1. In light of this revision, original claims 2, 4, and 5 have been deleted from the replacement claim set. The dependency of original claims 3 (now claim 2) has been revised. This claim now depends from claim 1. The chart below details the correlation between the original claims and the replacement claims.

Original Claim	Replacement Claim
1	1
2	cancelled (subject matter now part of claim 1)
3	2 (now depends from claim 1)
4	cancelled
5	cancelled
6	3
7	4
8	5
9	6
10	7
11	8
12	9
13	10
14	11
15	12
16	13
17	14
18	15
19	16
20	17
21	18
22	19

Application Number: PCT/US04/23867  
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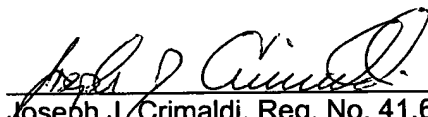
23	20
24	21
25	22

It should be noted, that none of the cited art discloses, teaches or suggests producing nitric oxide via an anionic exchange resin.

In light of the above, entry of the attached replacement pages is respectfully requested.

Should the Examiner wish to discuss any of the foregoing in more detail, the undersigned attorney would welcome a telephone call.

Respectfully submitted,



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November 23, 2005

1307608.1.089498.0480

## **CLAIMS**

What is claimed is:

1. A method for producing nitric oxide comprising:  
producing nitric oxide by using an anionic exchange resin.
2. The method of claim 1, wherein the anionic exchange resin has a counter ion selected from the group consisting of ascorbate, nitrite, a weak-acid anion, lactate, and a diazeniumdiolate-containing composition.
3. The method of claim 1, wherein the anionic exchange resin is in a gel or cream.
4. A method for producing nitric oxide comprising the step:  
mixing a salt with a cream, gel, or combination thereof to produce nitric oxide.
5. The method of claim 5, wherein the salt is sodium chloride, sodium phosphate, or sodium acetate.
6. The method of claim 5, wherein the cream or gel is an ion-free hydrogel, an off-white-oil-in-water vanishing cream, or a combination thereof.
7. The method of claim 5, wherein the cream or gel has an ionic exchange resin therein.
8. The method of claim 7, wherein the ionic exchange resin is an anionic exchange resin.
9. The method of claim 8, wherein the anionic exchange resin has a counter ion selected from the group consisting of ascorbate, nitrite, a weak acid anion, lactate, and a diazeniumdiolate-containing composition.

10. The method of claim 7, wherein the ionic exchange resin is an cationic exchange resin.

11. The method of claim 10, wherein the cationic exchange resin has a hydrogen-atom counter ion.

12. The method of claim 9, further comprising reacting a hydrogen-atom cation with the ascorbate to produce ascorbic acid.

13. The method of claim 9, further comprising reacting ascorbic acid with the nitrite to form nitric oxide.

14. The method of claim 9, further comprising reacting a hydrogen cation with the diazeniumdiolate-containing composition to produce nitric oxide.

15. A method for producing nitric oxide comprising the step:  
producing nitric oxide by adding a Ph adjuster to a nanofiber having a diazeniumdiolate functional group.

16. The method of claim 15, wherein the nanofiber is a linear polyethylenimine fiber.

17. The method of claim 15, wherein the nanofiber is an electrospun nanofiber.

18. The method of claim 15, wherein the Ph adjuster is phosphate, lactate, citrate, or a combination thereof.

19. A method for producing nitric oxide comprising the step:  
producing nitric oxide by adding a Ph adjuster to a nanoparticle having a diazeniumdiolate functional group.

20. The method of claim 19, wherein the nanoparticle is cellulose, polystyrene, cm cellulose, or chitosan.

21. The method of claim 19, wherein the Ph adjuster is phosphate, lactate, citrate, or a combination thereof.

22. The method of claim 19, wherein the nanoparticle is within or attached to an electrospun nanofiber.